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## ENUMERATION AND DESCRIPTION OF THE SEPTORIAS OF NORTH AMERICA.

BY GEORGE MARTIN, M. D.

This genus was described by Fries, S. M., Vol. 3, p. 480. Its character, as now accepted, is as follows: Perithecia globose or lenticular, thinly membranaceous, pierced with a small opening or fissured, usually developed beneath the epidermis in discolored spots on leaves, through which they generally burst or become erumpent; sporules cylindrical, linear or filiform, pluriseptate or guttulate, rarely entire, hyaline, often discharged in gelatinous threads or masses; basidia small or none.

Descriptions copied without being verified are enclosed in quotation marks.

1. *SEPTORIA ACERINA*, Pk. 25th Rep. N. Y. S. M., p. 87, Sylloge III, p. 478; Ellis, N. A. F., No. 625.

Spots red to pale brown, often subangular, 3—5 millim. broad; perithecia light brown, lenticular, collapsing, amphigenous, 195—240  $\mu$  in diameter; sporules hyaline, filiform, indistinctly septate or continuous, curved, 30—45 $\times$ 2". On leaves of *Acer Pennsylvanicum* and *A. dasycarpum*.

2. *SEPTORIA ACERICOLA* (Thum.) Sacc. Sylloge, III, p. 507. "*Cryptosporium acericolum*, Thum.

"Perithecia black, subglobose, punctiform, covered, deposited in many minute lines or gregarious; sporules cylindrical, pallid, brown-gray, curved lunate, ends subcontracted and rounded, 27  $\times$  3½—4  $\mu$ ." On dry pine leaves. South Carolina.

3. *SEPTORIA ACICULOSA*, E. & Everhart. Bull. Torrey Bot. Club II, p. 73; Sylloge III, p. 511.

Perithecia innate, superficial, mostly in clusters of two or three together, black, minute, hypophyllous, 120—135  $\mu$  in diameter; sporules hyaline, acicular, continuous, 12—20  $\times$  1—2  $\mu$ ; accompanied with *Sphaerella Fragariae*, Tul. On leaves of *Fragaria*. Illinois.

4. **SEPTORIA ALBANIENSIS**, Thum. Bot. Gazette III, p. 122; Mycotheca Universalis, No. 1294; Sylloge III, p. 501.

"Spots on the upper surface of the leaves irregular, often confluent, variable in size, yellow, with a yellowish or brown margin, on the under surface yellow-gray, indeterminate, margin obscure; perithecia black, punctiform, sublenticular, erumpent, scattered, hypophyllous; sporules rod-shaped, or cylindrical, ends subrotund, curved, 1-septate, hyaline,  $30-32 \times 2\frac{1}{2} \mu$ ." On leaves of *Salix lucida*. New York.

5. **SEPTORIA ALBO-NIGRA**, B. & C. Sylloge III, 507.

"Spots white, margin brown; perithecia minute; sporules filiform,  $55 \mu$  long." On living leaves. Alabama.

6. **SEPTORIA ALBO-PUNCTATA**, Cke. Grev. XII, p. 25; Sylloge III, p. 493; Rav. F. A., p. 510; Ellis, N. A. F., No. 622.

Spots circular, white, 1-2 millim. in diameter, border purple; perithecia dark brown, flattened, epiphyllous, 1-2 in a spot,  $100-110 \mu$  in diameter; sporules hyaline, linear, nucleolate or faintly multiseptate,  $60-80 \times 2-3 \mu$ . On leaves of *Vaccinium arboreum*. South Carolina and Florida.

7. **SEPTORIA ALISMATIS**, Oudem. Sylloge III, p. 569.

Spots brown, subcircular, gray in the center; perithecia brown, minute, innate, barely visible, mostly hypophyllous; sporules hyaline, cylindrical, 1-3-nucleolate,  $16-18 \times 3 \mu$ . On leaves of *Alisma Plantago*. Iowa.

8. **SEPTORIA AMPELINA**, B. & C. Sylloge III, p. 479; Rav. F. A., No. 29; Ellis, N. A. F., No. 623.

Spots brown, angular, often confluent; perithecia dark brown, innate, slightly prominent, poorly defined, amphigenous,  $80-100 \mu$  in diameter; sporules hyaline, linear, curved, 3-4-septate,  $40-75 \times 3 \mu$ . On leaves of *Vitis vulpina*. Texas and South Carolina.

9. **SEPTORIA ANGUSTATA** (Cke.) Sacc. Sylloge III, p. 569; *Darluca angustata*, Cke.

"Perithecia — — —; sporules pallid olive, subfusiform, straight or curved,  $30 \times 3 \mu$ ." On *Typha*. North America.

10. **SEPTORIA AQUILEGÆ**, E. & K. n. sp. *S. Aquilegiae*.

Spots light brown, subangular, 2-4 millim. broad, border dark brown, often confluent; perithecia brown, lenticular, innate, slightly prominent, scattered, rather numerous, membranaceous, very delicate, amphigenous,  $60-80 \mu$  in diameter; sporules hyaline, linear, slightly curved, faintly nucleolate,  $25-30 \times 1 \mu$ . On leaves of *Aquilegia vulgaris*. Ohio.

11. **SEPTORIA ASTRAGALI**, Rab. Sylloge III, p. 508; N. A. F., 1135.

Spots gray or pallid, irregular, partially limited by the veinlets, 1-2 millim. broad, often confluent; perithecia pale yellow to brown, flattened, innate, slightly prominent, very delicate, 2-4 in a spot, epiphyll-

lous, 150—250  $\mu$  in diameter; sporules hyaline, filiform, flexuous, 6—9-septate, 80—100 x 3  $\mu$ . On leaves of *Lathyrus ochroleucus*, Minnesota, *L. maritimus*, Massachusetts, a variable species.

12. SEPTORIA ASTRAGALICOLA, Pk. Torrey Bull. XII, p. 33.

"Spots indefinite or obsolete; perithecia black, hypophylloous, lenticular, 127—177  $\mu$  broad; sporules subcylindrical, straight or slightly curved, obtuse, 40—60 x 5—6  $\mu$ , sometimes plurinucleate, oozing out in whitish or faintly pinkish masses or tendrils. On leaves of *Astragalus*. Arizona. Differs from *L. Astragali* in the situation of the perithecia and character of the spots."

13. SEPTORIA ATROPURPUREA, Pk. 33d N. Y. S. Report; Sylloge III, p. 549.

Spots subcircular, sometimes confluent, purple-brown on the upper surface, pallid in the centre, pale purple on the under surface, with the center yellow-brown; perithecia few, brown or pallid, globose, epiphyllous, 60  $\mu$ ; sporules hyaline, filiform, straight or curved, 50—100 x 2  $\mu$ . On living leaves of *Aster macrophyllus* and *A. cordifolia*. New York and Pennsylvania.

14. SEPTORIA BACILLIGERA, Winter. Jour. of Mycol. I, p. 122.

"Spots small, subangular or irregular, at times confluent, white, dry, mostly one millim. in diameter, surrounded by a black line; perithecia scattered, minute, globose, black, membranaceous, stomatous, 80—90  $\mu$  in diameter; sporules numerous, hyaline, rod-shaped, often slightly enlarged at one end, mostly straight, 1—3-septate, at last constricted at the septa, 9—23 x 3—3 $\frac{1}{2}$   $\mu$ ." On leaves of *Ambrosia trifida*. Missouri.

15. SEPTORIA BAPTISLÆ, Cke. Sylloge III, p. 508; Rav. F. A., No. 30; Ellis, N. A. F., No. 624.

Spots suborbicular, purple; perithecia brown, innate, slightly prominent, mostly hypophylloous, 75—90  $\mu$  in diameter; sporules hyaline, linear, straight or curved, nucleolate, 45—60 x 3  $\mu$ . On leaves of *Baptisia perfoliata*. South Carolina.

16. SEPTORIA BESSEYI, Pk. Bull. Torrey Bot. Club VI, p. 77; Sylloge III, p. 495.

"Hypophylloous; perithecia more or less abundantly scattered over the whole lower surface of the leaf, slightly prominent, at first pale ferruginous or subochraceous, then black; sporules large, cylindrical, obtuse, moderately curved, usually containing several nucleoli, 40—55 x 4  $\mu$ , oozing out in whitish or pinkish-white masses." On living leaves of *Fraxinus*. Iowa.

17. SEPTORIA BETULICOLA, Pk. 34th N. Y. S. Rep., p. 44; Sylloge III, p. 506.

Spots red-brown, round or somewhat angular, pallid in the center; 1—2 millim. broad; perithecia black, subglobose, innate, slightly prominent, mostly hypophylloous, scattered, 75—80  $\mu$ ; sporules hyaline, filiform, curved, entire, 30—45 x 1  $\mu$ . On living leaves of *Betula*. New York.

18. SEPTORIA BIDENTIS, Sacc. *Sylloge III*, p. 547.

Spots pallid, subrotund, dry, one millim. in diameter, border brown, narrow, raised, distinct; perithecia brown, innate, becoming visible, scarcely prominent, 2—5 in a spot, epiphyllous, 65—75  $\mu$  in diameter; sporules hyaline, filiform, flexuous, indistinctly 1—3-septate, 23—26 x 1—1 $\frac{1}{2}$   $\mu$  ("30—35 x 1—1 $\frac{1}{2}$   $\mu$ ," Sacc.) On leaves of *Bidens bipinnata*. Missouri.

19. SEPTORIA BRUNELLÆ, E. & Hol. *Jour. of Myc. I*, p. 6; Ellis, N. A. F., No. 1606.

Spots dark rusty brown, irregular and variable in size, border raised, narrow; perithecia black, slightly prominent, thickly scattered, epiphyllous, 100—130  $\mu$  in diameter; sporules hyaline, with a brownish tint, linear, clavate, multiseptate, nearly straight, 40—75 x 1 $\frac{1}{2}$ —2  $\mu$ . On leaves of *Brunella vulgaris*. Iowa.

20. SEPTORIA CACALLÆ, E. & K. *Am. Nat. XVII*, p. 1164; Ellis, N. A. F., No. 1132 and 1610.

Spots rusty brown or gray in the center, border raised, brown, 2—5 millim. broad; perithecia black, lenticular, innate, slightly prominent, scattered, mostly epiphyllous, 90—100  $\mu$  in diameter; sporules hyaline, linear, nearly straight, faintly nucleolate, 30—45 x 1 $\frac{1}{2}$ —2  $\mu$ . On leaves of *Cacalia tuberosa* and *C. atripliciaria*. Kansas to Florida.

21. SEPTORIA CAMPANULÆ (Lev.) Ellis, N. A. F., No. 1616; *Sylloge III*, p. 544. *Ascospora Campanulae*, Lev.

Spots pallid, dry, subangular, partially limited by the veinlets, often confluent, 3—6 millim. broad; perithecia brown, lenticular, slightly prominent, clustered, amphigenous, very delicate, membranaceous, 60—90  $\mu$  in diameter; sporules hyaline, filiform, 2—3-septate, 21—24 x 1  $\mu$ . On leaves of *Campanula Americana*. Kansas.

22. SEPTORIA CANNABIS (Lasch.) Sacc. *Septoria cannabina*, West.; *S. cannabina*, Pk., 35th Rep., p. 137; *Ascochyta Cannabis*, Lasch.; *Sylloge III*, p. 557; Ellis, N. A. F., No. 1146.

Spots variable, dry, dull yellow; perithecia often epiphyllous, densely gregarious, innate, globose-depressed, 80—90  $\mu$  in diameter; sporules hyaline, linear, straight or curved, obscurely 1—3-septate, "45—55 x 2—2 $\frac{1}{2}$   $\mu$ ." On leaves of *Cannabis sativa*. Kentucky.

23. SEPTORIA CELTI-GALLÆ, Gerard. *Bull. Torrey Bot. Club VI*, p. 78; *Sylloge III*, p. 499.

"Spots none; perithecia very small, black, immersed, scattered; sporules none." On leaves of *Celtis occidentalis*. New York.

24. SEPTORIA CEPHALANTHI, E. & K. *Bull. Torrey Bot. Club II*, p. 115; Ellis, N. A. F., No. 1611.

Spots red-brown, circular, 1 $\frac{1}{2}$ —3 millim. in diameter, border narrow, slightly raised; perithecia dark brown, subglobose, slightly prominent,

mostly clustered in the center of the spots, epiphyllous, 120—130  $\mu$  in diameter; sporules brownish, filiform, nearly straight, continuous, 12—20 x 1  $\mu$ . On leaves of *Cephalanthus occidentalis*. Kansas.

25. *SEPTORIA CERASTII*, Rob. & Desm. Sylloge III, p. 518; N. A. F., No. 1139.

Spots pallid, large; perithecia brown, subglobose, erumpent, amphigeneous, numerous, 135—140  $\mu$  in diameter; sporules hyaline, filiform, one end a little enlarged, entire, 35—40 x 1  $\mu$ . On *Cerastium viscosum*, *C. vulgatum* and *C. oblongifolium*. Kentucky.

26. *SEPTORIA CERASINA*, Pk. 29th Rep. N. Y. S. Mus., p. 48; Sylloge III, p. 489; Ellis, N. A. F., No. 1609.

Spots red-brown, turning light brown or pallid in the center, often confluent, subangular, 1—3 millim. in diameter; perithecia obsolete; acervuli flattened, subepidermal, mostly hypophyllous, 300—400  $\mu$  in diameter; sporules subhyaline, cylindrical or subfusiform, ends subacute, one or more septate, curved, 40—60 x 2 $\frac{1}{2}$   $\mu$ , exuded in light amber-colored masses, or white at first. On leaves of *Prunus domestica* and *P. serotina*. New York. This probably should be transferred to *Phleospora*.

27. *SEPTORIA CEUTHOSPOROIDES* (Cke. and Hark.) *Cryptosporium ceuthosporoides*, Cke. & Harkess. Grev. IX, p. 127; Sylloge III, p. 490.

"Perithecia flat, brown, entire, thin, fissured above; sporules hyaline, fusiform, curved, 18—20 x 3  $\mu$ ." On dead leaves of *Eucalyptus*. California.

(To be continued.)

## NEW SPECIES OF FUNGI.

BY J. B. ELLIS AND B. M. EVERHART.

*ASTERINA INQUINANS*, E. & E.—On dead leaves of *Sabal Palmetto*, Louisiana, July, 1886. Rev. A. B. Langlois. Perithecia scutelliform, black, umbonate, of radiate-cellular structure, the marginal cells sub-elongated and slightly enlarged at their extremities; ascii ovate or obovate, contracted at the base into a short stipe, 35—40 x 18—22  $\mu$ ; sporidia irregularly crowded, ovate-elliptical or oblong-elliptical, yellowish and faintly uniseptate(?). The perithecia are thickly scattered over both surfaces of the leaf and look much like masses of exuded spores of some *Pestalozzia* or *Melanconium*.

*PHYLLACHORA OXALINA*, E. & E.—On living leaves of *Oxalis corniculata*, Faulkland, Del., August, 1885. A. Commons, No. 117. Gregarious, tuberculiform, minute ( $\frac{1}{2}$  millim.); stylospores oblong-fusoid, hyaline, 2-nucleate, then 1-septate, 7—8 x 2—3  $\mu$ . The part of the leaf occupied by the fungus turns brown and dries up.

VALSA MAGNISPORA, E. & E.—On dead maple limbs, Plainfield, N. J. G. F. Meschutt, July, 1886. Perithecia buried in the inner bark, not penetrating to the wood nor circumscribed by any black line, 6—10 in a cluster, globose-ovate, about one fourth millim. in diam., contracted above into short necks which burst in a cluster through the epidermis but project only slightly above it, their apices (ostiola) hemispherical, black, smooth and shining, with a minute central pore and sometimes lightly umbilicate; ascii subsessile, oblong-cylindrical, 100—120 x 18—22  $\mu$ ; sporidia biseriate, oblong-fusoid, hyaline, 1-septate, slightly curved, 25—35 x 9—11  $\mu$ . We have not seen a specimen of *Diaporthe Aceris*, Fckl., but that is said to have ascii only 60 x 8  $\mu$  and sporidia 14 x 4  $\mu$  and can hardly be the same as this.

MELANCONIS DECORAENSIS, Ell., var. *major*.—On dead birch limbs, Plainfield, N. J. (G. F. Meschutt). Has the sporidia longer (18—26 x 8—10  $\mu$ ) and mostly biseriate, but does not differ otherwise from the original specimens from Iowa. When well matured, the ostiola in both are distinctly quadrisulcate.

DIATRYPPELLA HERBACEA, E. & E.—On dead herbaceous stems (*Ambrosia trifida?*) September, 1886. Langlois, No. 505. Stroma tuberculiform, 1—2 millim. in diam., white inside, tinged with yellow above but black externally; perithecia ovate-globose, about one third millim. in diam., rather abruptly contracted above into a short, narrow neck, expanded at the surface of the stroma with a broad, obtuse, quadrisulcate ostiolum; ascii, including the slender base, 100—120 x 10—12  $\mu$ ; paraphyses soon disappearing; sporidia crowded in the upper half of the ascii, numerous pale yellowish, cylindrical, curved, 7—8 x 1—1 $\frac{1}{2}$   $\mu$ . On the same stems was a form of *Calosphaeria microtheca*, C. & E., with scattered or subseriate beaked perithecia, having fasciculate ascii about 20 x 3 $\frac{1}{2}$ —4  $\mu$ , truncate above and sporidia 3 $\frac{1}{2}$ —4 $\frac{1}{2}$  x  $\frac{2}{3}$   $\mu$ .

DIATRYPPELLA RAMULARIS, E. & E.—On dead branches of *Lonicera Japonica*, Pointe a' la Hache, La., December, 1886. Langlois, No. 861. Stroma tuberculiform, 1—2 millim. in diam., bursting out through longitudinal cracks in the bark, penetrating to the wood, which is marked with a black, circumscribing line, subtruncate above, dirty white within; perithecia 4—12 in each stroma, globose, with a short neck, walls thick and coriaceous; ostiola only slightly prominent, flat, 4—5-stellate-cleft, finally broadly perforated; ascii broad, clavate, 90—110 x 12—15  $\mu$ ; sporidia many, allantoid, yellowish, moderately curved, 6—10 x 1 $\frac{1}{2}$   $\mu$ .

DIATRYPE SPHÆROSPORA, E. & E.—On dead shoots of *Magnolia glauca*, Newfield, N. J., June, 1878. Stroma formed of the scarcely altered substance of the bark, erumpent but not very prominent, surrounded by the ruptured epidermis, small ( $\frac{1}{2}$ —1 millim.); perithecia in a single layer, 3—12, black, membranaceous, minute (one sixth to one fifth millim.), their smooth, black, obtusely conic ostiola dotting the surface of the stroma; ascii cylindrical, spore-bearing part 30—35 x 3  $\mu$ , with a slender thread-like base about 20  $\mu$  long; paraphyses not observed;

sporidia uniserial, yellowish-hyaline, eight in an ascus, globose, three  $\mu$  in diam. Outwardly, this is scarcely distinguishable from *D. minima*, E. & E. (Journ. Mycol., I, p. 91), but the marked difference in the sporidia seem to entitle it to specific rank. The stroma in some of the specimens is limited by a black line as in *D. minima*, but in others not.

**EUTYPA ECHINATA**, E. & E.—On dead branches of *Fraxinus*, Plaquemines, Co., La., December, 1886. Langlois, No. 952. Stroma surrounding the branches and extending along them for many inches, continuous or interrupted, penetrating (but not discoloring) the wood for about one millimeter and bounded by a thin black layer which, in a transverse section, appears as a black line. The epidermis is not discolored, but when this has disappeared, the exposed surface of the inner bark is seen to be thickly covered with snuff-brown, punctiform tufts of hyphae about 25 or 30  $\mu$  high, of a pale brown color and much resembling the tufted hyphae of some *Cercospora*, but, from the specimens seen, we have not been able to make out the conidia; perithecia globose,  $\frac{1}{2}$ — $\frac{1}{2}$  millim. in diam., with thick, coriaceous walls and, when mature and empty, black and shining inside, buried in the lower stratum of the inner bark and penetrating the wood more or less—sometimes entirely buried in it; ostiola cylindrical, rough, projecting about one millim., their apices rounded, smooth and black and pierced with a small, round aperture; asci clavate, 12—15 x 4  $\mu$  (spore-bearing part), with a slender, filiform base of about the same length and without paraphyses; sporidia allantoid, subhyaline, 2-nucleate, curved, eight in an ascus, about 4 x  $\frac{2}{3}$ —1  $\mu$ .

**ANTHOSTOMA SAPROPHILUM**, E. & E.—On rotten maple wood, Newfield, N. J., May, 1876. Stroma effused, blacking the surface of the wood but not discoloring it inside, but limited by a black circumscribing line, forming black, subelongated, subconfluent, indefinitely-limited spots  $\frac{1}{2}$ —1 cm. or more in extent; perithecia membranaceous, globose ( $\frac{1}{2}$ — $\frac{1}{2}$  millim.), buried in the wood and irregularly arranged in groups of 6—10 or more, with their hemispheric-conic ostiola distinctly prominent and finally pierced with a small, round opening, but not radiate-sulcate; sporidia elliptical, pale brown, 1—2-nucleate, uniserial, 5—6 x  $2\frac{1}{2}$ —3  $\mu$ . Much resembles *A. melanotes*, B. & Br., but readily distinguished by its much smaller sporidia. We have not seen *Sphaeria polynesia*, B. & C., but as far as we can judge from the brief description of that species, this is different.

**ANTHOSTOMELLA MINOR**, E. & E.—On petioles of *Sabal serrulata*, Florida. W. W. Calkins, No. 746. Perithecia scattered, one third millim. in diam., subglobose, with the upper part subconic and prominent, with a rather acute, papilliform ostiolum; asci linear, 65—75 x 5  $\mu$ ; sporidia uniserial, opaque, 2—3-nucleate, subinequilateral, 7—8 x  $2\frac{1}{2}$ —3  $\mu$ . The surface of the matrix, in the specimens seen, was covered with a thin black crust, but whether this has any connection with the perithecia, we could not say.

ANTHOSTOMELLA MELANOSTICTA, E. & E.—On dead leaves of *Sabal Palmetto*, Louisiana, December, 1886. Langlois, No. 830. Perithecia gregarious or scattered, buried in the parenchyma of the leaf with their black, dot-like ostiola barely projecting through the epidermis, which is not at all blackened or discolored; asci 80—110 x 12—15  $\mu$ ; sporidia subbiseriate, elongated-elliptical and subinequilateral, brown, continuous, 19—22 x 7—9  $\mu$ , with a thin, hyaline envelope at first.

LEPTOSPHÆRIA FRAXINI, E. & E.—On living leaves of *Fraxinus Americana*, Columbia, Mo., August, 1886. B. T. Galloway, No. 125. Spots amphigenous, rusty below, dirty white above, with a rusty brown border, small, orbicular (1 millim.) or elongated, 2—3 millim. and narrow; perithecia black, epiphytous, few, small (75  $\mu$ ), erumpent, indistinctly pierced above and with a rudimentary mycelium around the base; asci clavate-cylindrical, 55—70 x 8—10  $\mu$ ; sporidia biseriate, fusoid, somewhat curved, yellowish, nucleate, becoming 3—5-septate (mostly 4-septate), constricted at the middle septum when mature and sometimes slightly at the others, 20—25 x 3½—4  $\mu$ .

LOPHIOTOMA EROSUM, E. & E.—On decaying wood of *Salix*, Vineland, N. J. Perithecia buried in the substance of the wood, globose, ½—¾ millim. in diam.; ostiola erumpent, narrow, only slightly prominent; asci clavate-cylindrical, 90—100 x 12—15  $\mu$ , with abundant filiform paraphyses; sporidia subbiseriate above, oblong-fusoid or subnavicular, about 5-septate, hyaline at first, then yellowish and finally nearly opaque, mostly 20—25 x 7—8  $\mu$ , with a shrivelled appearance. The perithecia are greedily eaten out by a small beetle. Allied to *L. celestum*, C. & E., but smaller sporidia. Differs from *L. macrostomoides*, DeNot, in its immersed and smaller perithecia and its somewhat smaller sporidia.

LOPHIOTOMA LANGLOISII, E. & E.—On bark of decaying *Salix nigra*, lying on damp ground, Point a' la Hache, La., December, 1886. Langlois, No. 902. Perithecia gregarious, subconic, three fourths millim. in diam., about half buried in the bark, the projecting part dull black, roughish, with a narrow, more or less compressed, prominent ostiolum; asci subcylindrical, 110—120 x 12—15  $\mu$ , with abundant paraphyses; sporidia mostly biseriate, fusoid, 3-septate and slightly constricted at the septa, brown, slightly curved, each cell with a large nucleus, 34—40 x 7—8  $\mu$ .

LOPHIOTOMA (LOPHIOSPHÆRIA) RADICANS, E. & E.—On decorticated, decaying stems of *Rhus radicans*, Newfield, N. J., July, 1878. Perithecia scattered, small (one sixth millim.), buried in the wood, except the narrow, compressed, erumpent ostiolum; asci subcylindrical, 90—110 x 10—12  $\mu$  (spore-bearing part 75—80  $\mu$  long), surrounded and overtapped by abundant, thread-like paraphyses; sporidia biseriate, fusiform, 3-septate, hyaline, slightly curved and mostly constricted at the middle septum, 15—20 x 4—5  $\mu$ .

**LINOSPORA PALMETTO**, E. & E.—On dead places in living leaves of *Sabal Palmetto*, Point à la Hache, La., December, 1886. Langlois, No. 869. Perithecia globose, about one third millim. in diam., immersed, with the papillose ostiolum erumpent and included in a superficial, depressed-conic, cap-like stroma nearly as broad as the perithecia and around which the epidermis of the leaf is blackened as is also the parenchyma of the leaf around the perithecia; asci lanceolate, 75—80 x 8—10  $\mu$ , with abundant paraphyses; sporidia eight in an ascus, linear fusoid, yellowish nucleate, acute, 40—50 x 2— $2\frac{1}{2}$   $\mu$ . The perithecia are mostly in subelongated spots of a paler color than the surrounding part of the leaf.

**SPHÆRELLA SERRULATA**, E. & E.—On dead stems of *Sabal serrulata*, Florida, January, 1887. W. W. Calkins. Perithecia minute, covered by the cuticle, which is blackened over them, rather prominent, with an acute, papilliform ostiolum, mostly collected in groups of 6—12 or arranged in a seriate manner; asci oblong-lanceolate, 35 x 7—8  $\mu$ ; sporidia biseriate, oblong-fusoid, 2-nucleate, hyaline, 6—8 x  $2\frac{1}{2}$   $\mu$ , ends rather obtuse. Differs from *S. sabaligena*, E. & E., in its smaller, grouped perithecia and in its smaller sporidia without septa.

**SPHÆRELLA ROSIGENA**, E. & E.—On living leaves of cultivated roses, Louisiana. Langlois, No. 689. Maculicola; spots amphigenous, reddish-brown, with a purplish border, definite, 3—4 millim. in diam.; perithecia epiphyllous, thickly scattered over the spots, minute (60—75  $\mu$ ), partly erumpent, subastomous, black; asci subclavate-oblong, 25—30 x 8—10  $\mu$ ; sporidia biseriate, clavate-oblong, hyaline, 1-septate, 10—12 x 2  $\mu$ , ends subacute. Not to be confounded with *Sphærella (Læstadia) Rosæ*, Auersw.

**SPHÆRELLA SICYCICOLA**, E. & E.—On living leaves of *Sicyos angulata*, Missouri. B. T. Galloway, No. 51. Spots amphigenous, small (1—2 millim.), dirty white, suborbicular or partly limited by the veinlets of the leaf, thin and transparent in the center; perithecia few, 1—3, often only one in the center of a spot, epiphyllous, black and subshining, about 100  $\mu$  in diam., sublenticular, with a rather broad perforation above, structure coarsely cellular; asci cylindrical-oblong, 40—50 x 6—7  $\mu$ , sessile; sporidia biseriate, ovate-oblong, hyaline, uniseptate and somewhat constricted, 8—11 x 3— $3\frac{1}{2}$   $\mu$ , ends rounded or subacute.

We have received from Mr. Commons, Delaware, specimens of what must be the *Sphaeria Zizaniae*, Schw., Syn. N. Am., 1750. On languishing leaves of *Zizania aquatica*. Perithecia immersed and quite evenly scattered, not seriate; asci oblong-cylindrical, turgid, 45—55 x 10—12  $\mu$ ; sporidia biseriate, clavate-oblong, 1-septate and constricted, hyaline, straight or slightly curved, 15—20 x 5—6  $\mu$ . The species belongs in *Spharella*. The specimens of *Sphaeria Zizaniae*, Schw., in Herb. Schw., are sterile and poor, but the Delaware specimens appear to be that species.

## NOTES ON FLORIDA FUNGI.--No. 12.

BY W. W. CALKINS, CHICAGO, ILLINOIS.

184. HYDNUM MEMBRANACEUM, Bull.—Very abundant on the under side of logs. The color varies from pink to violet and gray, when fresh.
185. HYDNUM ALUTACEUM, Pers.—Not common; on rotten wood.
186. HYDNUM XANTHUM, B. & C.—On pine bark; not abundant.
187. HYDNUM GELATINOSUM, Pers.—Found on a rotten pine log; very fine.
188. HYDNUM STEVENSONI, B. & Br.—On pine logs; common.
189. HYDNUM ZONATUM, Batsch.—On the ground in old plantation. Besides the foregoing, I also found those species enumerated by me in Vol. II, Journ. Mycol., more or less abundantly.
190. KNIFIA CANDIDISSIMA, B. & K.—Found plentifully on fallen cedar trees; very fine and reminds one of *Grandinia granulosa*, but the granules are more scattered.
191. HYSTERIUM LINEOLATUM, Cke.—Abundant on stems of *Sabal*.
192. PENICILLIUM GLAUCUM, Lk.—Common on old *Polyporus*.
193. DIPLOCLADIUM MELLEUM, B. & Br.—On *Stereum subpileatum*.
194. CORTICIUM CROCICREAS, B. & C.—On the under side of old limbs on the ground; color yellow.
195. CORTICIUM EFFUSCATUM, C. & E.—On old *Persea*; cream color.
196. CORTICIUM ALUTARIUM, B. & C.—On old limbs; not common.
197. CORTICIUM CINEREUM, Pers.—Occasional on old limbs.
198. CORTICIUM PUBERUM, Fr.—On oak limbs; white color.
199. CORTICIUM RADIOSUM, Fr.—Ochre-red, and formerly referred to as a variety of *C. ochroleucum*; not common.
200. CORTICIUM ECHINOSPERMUM, Ell.—On pine logs.
201. CORTICIUM CALCEUM, P.—Rare on red cedar logs.
202. CORTICIUM EPICHLORUM, B. & C.—Rare on old limbs. Besides the above, we have other species not yet identified.
203. NECTRIA LACTEA, Ell. & Morgan.—Found by Mr. Ellis on old *Stereum subpileatum* sent by me; common.
204. PEZIZA SCUTELLATA, L.—On old *Persea*; deep red and about the size of a half dime.
205. ASTERINA INQUINANS, E. & M.—Abundant on *Sabal* stems.
206. LENTINUS VILLOSUS, Fr.—Common on old logs.
207. MERULIUS TREMELLOSUS, Schrad.—Rare on old pine bark.
208. HYPPOXYLON MINIATUM, Cke.—Not common; on dead wood.
209. HYPPOXYLON PERFORATUM, Sw.—On limbs and *Sabal* stems.
210. HYPPOXYLON JECORINUM, B. & R.—Very rare; on a dead limb.
211. IRPEX CORIACEUS, B. & R.—Found on old pine limbs.
212. IRPEX MOLLIS, B. & C.—Common on old trees.
213. IRPEX SINUOSUS, Fr.—Occasional on old gum trees.
214. POROTHELIUM LACERUM, Fr.—On old log; not common.
215. LEOTIA CHLOROCEPHALA, Sw.—A beautiful species; found growing abundantly in old worn out plantation.
216. USTULINA VULGARIS, Tul.—In decayed places on living oaks.

## NEW LITERATURE.

BY W. A. KELLERMAN.

**"NEW BRITISH FUNGI."** By M. C. Cooke. Grevillea, March, 1887.

**"BRITISH PYRENOMYCETES."** By G. Massee. I. e.

**"SYNOPSIS PYRENOMYCETUM, CONTINUED."** I. e.

**"FUNGI NOVI BRASILIENSIS."** Auctore Dr. G. Winter. I. e.

**"SOME AUSTRALIAN FUNGI."** By M. C. Cooke. I. e.

**"ON CERTAIN CULTURES OF GYMNOSPORANGIUM, WITH NOTES ON THEIR RÆSTELÆ."** By Roland Thaxter. Presented, Dec. 8, 1886. Proceedings of the American Academy of Arts and Sciences.

Dr. Farlow's "Notes on Some Species of Gymnosporangium and Chrysomyxa of the U. S.," communicated to the Academy in February, 1885, is here supplemented by an account of farther experiments while the author was studying in Dr. Farlow's laboratory. The paper covers nine pages, gives an account in detail of the work, comments on the cofusion that exists as to identity and distinctions of the species of *Ræstelia* and concludes with the summary of the species of *Gymnosporangia* and their *Ræteliae* as follows: *G. conicum-R. cornuta*; *G. clavipes-R. aurantiaca*; *G. clavariæforme-R. lacerata*; *G. macropus-R. pyrata*; *G. biseptatum-R. botryapites*; *G. Ellisii-R. transformans* (probably); and *G. globosum* (?)

**"UEBER DIE INFECTIO N DER NÄHRPFLANZEN DURCH PARASITISCHE PEZIZA-ARTEN."** Von J. H. Wakker. Botanisches Centralblatt, No. 10 and 11, 1887.

**"LE PHALLUS ET LA MORILLE."** Le Naturaliste Canadien. Fevrier, 1887.

**"RABENHORST'S KRYPTOGAMEN-FLORA."** PILZE VON DR. G. WINTER. 27. Lieferung. Schluss der II. Abtheilung.

This Lieferung, pp. 865-928, concludes the second part, which contains the *Ascomycetes*. It is accompanied by a title page, preface, table of contents and genera-index. The full index to this volume, as well as the next Lieferung, is to appear very soon.

**"FRUIT OF THE FUNGUS UNCI NULA FLEXUOSA, ON THE LEAVES OF THE HORSE-CHESTNUT."** By J. L. Zabriskie. Journal of the New York Microscopical Society, December, 1886.

**"FRAGMENTA MYCOLOGICA XXI."** Auctore, P. A. Karsten, Hedwigia, November and December, 1886.

**"EXOTISCHE PILZE IV."** Von Dr. G. Winter, Hedwigia, January and February, 1887.

## CORRECTION.

*Agaricus agglutinatus*, No. 22, on page 31, should be *Agaricus agglutinatus*.

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